support longwall has also been introduced in mines having suitable geo-mining conditions. Certain special methods like blasting gallery, cable bolting etc. with mechanised loading have also been introduced for extraction of thick seam.Continuous miner technology has recently been introduced. Roof bolts are being used extensively in underground m ies of CIL replacing the timber supports. Coal India Limited also has plans to extend such mechanisation in more mines in future in a phased manner.

(c) and (d) Manual underground mining requires deployment of more workers in underground. This increases the chances of number of workers being exposed to hazards of underground mining like fall, obnoxious and inflammable gases, inundation, fire etc. In manual mining, the productivity is less increasing thereby the cost of operation, especially with high wage cost. Due to adverse geo-mining conditions, presence of old workings/ standing pillars and non-availability of high production equipment indigenously, mechanisation in all underground mines is not possible at once.

Foreign Collaboration for the Development of Mines

†2825. SHRI DILIP SINGH JUDEV: Will the Minister of COAL AND MINES be pleased to state:

(a) the countries with whom agreements have been entered into for collaboration in mining works;

(b) the details thereof;

(c) the details of benefits to the country out of these agreements; and

(d) the details of cooperation in mining, India has with other countries?

THE MINISTER OF STATE IN THE MINISTRY OF COAL AND MINES (SHRI RAVI SHANKAR PRASAD): (a) to (d) The Government has not entered into any agreements with any foreign country for collaboration in mining works in the non-fuel, non-ferrous and non-atomic mineral sector. However, to facilitate bilateral cooperation in the fields of geology and mineral resources the Government signed Agreements/Memorandum of Understanding (MOU) *inter-alia* with France, South Africa, Vietnam, Mongolia and Morocco. These Agreements/MOUs envisage

†Original notice of the question was received in Hindi.

bilateralcooperation programmes in research and development, training of pesonnel and acquiring state-of-art technologies in the fields of mineral exploration and development.

Mineral Exploration by MECL in A.P.

2826. DR. DASARI NARAYANA RAO: Will the Minister of COAL AND MINES be pleased to state:

(a) whether Mineral Exploration Corporation Limited (MECL) is conducting mineral exploration activities in Andhra Pradesh;

(b) if so, details of the MECL's activities in the State for the last three years;

(c) whether mineral deposits were found in the State during the said period; and

(d) if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF COAL AND MINES (SHRI RAVI SHANKAR PRASAD): (a) to(d) Yes, Sir. During the last 3 years, Mineral Exploration Corporation Limited (MECL) has carried out exploration for coal in Warangal, Adilabad, Khammam and West Godavari districts and for gold in Kurnool district in the state of Andhra Pradesh.The work involved exploratory drilling, developmental mining and associated geological & laboratory studies.The year-wise breakup of drilling & mining activities of MECL during the last 3 years is as below:—

Year	Drilling (in metres)		Developmental mining (in metres)	
	Coal	Gold	Coal	Gold
1999-2000	26383	—	1342	—
2000-2001	9827	2065	1489	—
2001-2002	17991	6296	934	72

Reserves of 1350.83 million tonnes of coal of various grades and 1.90 million tonnes of gold ore of probable category have been estimated by MECL in Andhra Pradesh.